

BOARD OF TRADE

Safety of seamen

Report of the Steering Committee
on the safety of merchant seamen



LONDON: HER MAJESTY'S STATIONERY OFFICE 1970

SBN 11 510400 3

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Appendix A

Membership of Steering Committee

Membership of sub-committee A on accident reporting and training in safety

Membership of sub-committee B on the medical aspects of accident prevention.

I. Origins of the Steering Committee

1. The Minister of State, Board of Trade, set up the Steering Committee on the Safety of Merchant Seamen following consultation with representatives of shipbuilders, ship-owners, officers and ratings of the Merchant Navy and interested Government Departments at a meeting on 17 July 1967, which had been called together to discuss the best method of pursuing the recommendations made in paragraphs 36 to 40 of the Final Report of the Pearson Court of Inquiry into the Shipping Industry (Cmnd No. 3211) February 1967.* Evidence had been given to the Court of Inquiry by the National Union of Seamen and by the Merchant Navy and Airline Officers' Association concerning the high incidence of fatal and other accidents to seamen and drawing attention to the lack of protection for seamen at sea equivalent to that afforded by regulations under the Factories Acts to workers on a ship in dock or in a shipyard. The British Shipping Federation Ltd. in their submission had pointed to the safeguards inherent in the Board of Trade rules relating to the construction and equipment of merchant ships and to the notices on particular matters of safety published by themselves and by the Board of Trade. The Court of Inquiry in reviewing the submitted evidence were impressed by the readiness of all sides of the industry to come to grips with the problems and recommended that the Board of Trade should examine the situation jointly with the industry, noting that all sections of the industry were ready to co-operate in framing a safety code laying down standards of maintenance and of equipment as well as safe working practices. The Court also recommended that consideration should be given to a requirement to report all accidents, to the provision of arrangements for inspection, to the appointment of safety officers and safety committees on board ship and to the question of whether legal enforcement was desirable.

2. It was considered that these questions could best be studied by a group which though reasonably compact, would nevertheless be representative of all sections of the shipping industry and at the same time contain the experience and understanding necessary to its task. The Steering Committee was accordingly constituted from the outset with a minimal representation, on the one side of ship-owners, officers and seamen and on the other, of professional officers from the Board of Trade and from the Department of Employment and Productivity. During the course of its work the original membership was re-inforced by further specialist assistance as need arose. The Steering Committee met on nineteen occasions between 30 August 1967 and 9 April 1970. In addition, two sub-committees which were set up to make fuller studies of particular aspects each met once. The names of those taking part in the work of the Steering Committee and the sub-committees are given in Appendix A.

II. Functions of the Steering Committee

3. At its setting up, the functions of the Steering Committee had been conceived as the study of the issues of the safety of seamen on board ship at sea and in port raised in the Pearson Report† and the supervision of the preparation of a code dealing with safety precautions, but it had not been thought desirable to tie the hands of the Committee by giving it precise directions on how it should develop its work. It was, however, recognised that a substantial measure of safety already existed in the provisions of statutory regulations for lifesaving appliances, fire-fighting appliances and

*Final Report of the Court of Inquiry into certain matters concerning the Shipping Industry. 1967. Cmnd. 3211 (HMSO)

†Cmnd. 3211 (HMSO)

shipborne radio equipment. These matters and the long-term health hazards of employment in the Merchant Navy were therefore specifically excluded from the work of the Committee which was envisaged as concerning itself mainly with safe practices in the use of machinery and equipment and in the movement of the crew about the ship. In the circumstances, the Steering Committee at its first meeting set its own terms of reference in the following terms:

“To draw up a Code of Practice embracing accident prevention and safety instructions in connection with the use of machinery and equipment on board merchant ships and in the movement of the crew about the ship including immediate boarding and disembarkation.”

The Committee agreed that it was not the intention to construe these terms restrictively and in the event they were widened as occasion demanded. When sufficient progress had been made on the preparation of the Code, the Committee turned its attention to the more general issues which it had not written specifically into its own first terms of reference.

III. Code of Safe Working Practices

Compilation

4. It was decided that the preparatory work in drawing up the Code could best be advanced if the Committee could enlist the assistance of a mercantile marine officer with recent sea-going experience. Through the good offices of the British Shipping Federation Ltd a shipping company agreed to second an experienced Chief Officer to the Board of Trade for a period of twelve months, subsequently extended to fourteen months, to act as research officer. Since this was the most important part of its task and also likely to be the most time consuming, the Steering Committee, in order to obtain the maximum benefit from the service of the research officer, gave priority to the supervision of the preparation of the Code of Safe Working Practices. No close precedent was found for a code of this kind in the marine context. The Committee's approach to the task was essentially empirical. A heavy responsibility thus rested upon the research officer and the Committee wishes to record its sincere appreciation of his considerable personal contribution to the work. Progress was facilitated by an early decision of the Committee to leave open the question whether the Code should be framed as regulations or as recommendations until the body of material could be considered as a whole. In practice this meant that the Code was developed as a series of recommendations and it was found that this generally permitted a more comprehensive coverage. There is a discussion as to whether some parts should be embodied in statutory regulations in paragraphs 12 and 13 below.

Statistics of accidents

5. In an attempt to identify the more important shipboard operations to be covered in the Code, the Steering Committee made an examination of available statistical information. The submissions to the Pearson Court of Inquiry* referred to in paragraph 1 had been concerned with the serious accident rate overall. More detailed information was provided to the Committee by an analysis of reported accidents during a period of six months prepared by the British Shipping Federation Ltd and some similar statistics published by the US Coast Guard† were also examined. It was found that only the most general guidance could be derived from these

*Cmnd. 3211 (HMSO)

†U.S. Coast Guard, November 1967, p 233-235.

figures which, though showing the occasion of an injury, could not indicate the root or principal cause of it sufficiently to suggest preventive measures. Reliance had therefore to be placed mainly upon experience and judgment in determining the working circumstances likely to be hazardous in an identified area of operations. In addition, the research officer had access to reports made to the Board of Trade of investigations into the more serious accidents and all the representatives from industry contributed summary information of individual accidents taken from their own records. The Committee's later consideration of means of improving accident reporting and the presentation of statistics is referred to in paragraphs 28 to 30 below.

Coverage

6. The Code which accompanies this Report* is directed mainly at cargo vessels and passenger liners. A Tanker Safety Code published by the Chamber of Shipping of the United Kingdom†, although primarily concerned with safety in the operation of tankers, already covered the special hazards to men working on those vessels and the Steering Committee decided that it would be inappropriate to prepare a second and duplicate series of recommendations covering these special hazards. The general sections of the new Code are of course applicable to tankers as to other vessels and they specifically draw attention to the Tanker Code as the source of information on those safe practices solely applicable to tankers. The Committee noted, however, that the format of the Tanker Safety Code did not lend itself to the easy separation of material appropriate to ratings. It recommends therefore that the Chamber of Shipping of the United Kingdom be invited to extract from the Tanker Code and put together in convenient form for dissemination to all ratings working on tankers, the material relevant to special working risks on those vessels.

7. Similarly the Steering Committee was informed by the Chamber of Shipping of the United Kingdom that arrangements were being made to provide masters of bulk chemical carriers with information on hazards appertaining to the specific cargoes being carried, including safeguards to crew, which would be far more comprehensive and effective than any material which could be provided within a reasonable compass in the Code of Safe Working Practices. It was further noted that the question was currently under study in the Inter-Governmental Maritime Consultative Organisation (IMCO), not only in the aspects of the construction of the vessel but also in relation to principles of safe handling of the cargo. Special provisions for this class of vessel have not therefore been included in the Code at this particular time.

8. The Steering Committee also considered a variety of other specialised vessels including roll-on roll-off vessels, tugs, sea-going dredgers and oil or gas rig supply vessels. Although much of the Code is concerned with operations not carried out on these vessels it is considered that the general sections, and to a certain extent some other sections, should be regarded as applicable to them.

Paint hazards

9. When considering the precautions to be observed in painting, an every day task on board ship, the Committee was somewhat perturbed to discover that seafarers had little realisation of the possible toxic nature of ingredients in paint and that there was no existing system of information which would

*Code of safe working practices for the safety of merchant seamen. 1970. (HMSO).

†Tanker Safety Code. Chamber of Shipping of the United Kingdom. 1963.

bring the risks to their notice. This is a reflection from the general legislative position. The sole regulations applicable are the Lead Paint Regulations 1927,* which require a container to be marked if the lead content of the paint exceeds a given proportion. In practice, manufacturers also give on their labels a warning of solvents of low flash points and some include a notice of precautions to be taken where ingredients might harm the skin. Approaches to the associations and to individual paint manufacturers suggesting that danger warnings, where appropriate, should be printed on all paint containers, have met with expressions of willingness to co-operate if a scheme of marking is evolved. The Committee did not consider itself competent to prepare such a scheme, although it was aware that the main risks probably arise from fungicidal and insecticidal constituents, and it is therefore recommended that the Board of Trade should initiate a study into the question, enlisting the co-operation of the Home Office and the Department of Employment and Productivity, which have the necessary technical resources. Consideration should be given to the desirability of framing regulations requiring paint containers to be labelled with prominent and clear warnings of hazards that might affect the users. The Committee would not regard the provision of warning leaflets alone as sufficient as they may be lost, although in particular cases such leaflets might be a valuable source of additional information. Alternatively, a voluntary scheme might be recommended as being more appropriate than statutory requirements. Common Market countries have already adopted a labelling scheme for basic chemicals which is due to come into force later this year, and it is understood that it is their intention to extend this scheme to compound products in the near future. If therefore there were proposals for introducing a labelling scheme, voluntarily or statutorily, much could be said for adopting the particular system in toto. The question is one of wide public importance, but should general regulation of this matter, or the acceptance of a voluntary scheme be found impracticable, then the Committee recommends that consideration be given to making special regulations relating to marine usage.

Repairs to and maintenance of machinery and electrical apparatus

10. The Committee considered whether to recommend that a "permit to work" system should be adopted in specific instances. Under it, the man or men in question must have a signed authority from the responsible supervisor before beginning the work and must report back by a given time or on completion, the supervisor being responsible for ensuring that the plant or machinery is not inadvertently activated in the interim. There is no doubt about the merits of the system where it has been applied but the Committee did not believe that they could recommend specifically where it should be adopted because on some ships a given operation could be carried out in complete safety without this complicated procedure whereas on other ships the circumstances might be quite different; the size of ship would often be a relevant factor. The Committee recommends therefore that owners should in suitable instances bring to the notice of masters and deck and engineer officers the added degree of safety that might be achieved by the adoption of the "permit to work" system for appropriate tasks as a reinforcement of the specific measures recommended in the Code in the way of notices, securing of controls and the like.

*Lead Paint (Protection against Poisoning) Regulations (S. R. & O. 1927/847).

Dissemination of the Code

11. The Code which accompanies this report* comprises safe working practices which in the view of the Steering Committee should be adopted on all ships of United Kingdom registry. It is recommended that copies of the Code be produced in sections in a loose leaf form so that an initial issue of the appropriate sections of the Code can be made to each serving officer and rating according to his rank and duties on board ship. Owners, masters and chief engineers should each have individual complete copies. Another complete copy should be carried on board each ship and be available for reference purposes to any member of the ship's complement. The sections for ratings should as soon as practicable be further reproduced in as terse a style as the subject matter allows and with suitable illustrations. All new entrants to the industry should be provided with copies during pre-sea training or, if not undertaking such training, through arrangements made within the industry or by the Mercantile Marine Offices of the Board of Trade.

Enforcement

12. The Committee was of the opinion that in the conditions operative in the Merchant Navy it was not necessary to impose the Code in general by regulations because experience with Merchant Shipping Notices issued by the Board of Trade showed that general adherence to its recommendations could be expected. Moreover it might well be impracticable to attempt to regulate many of the matters dealt with and, even where regulations might be practicable, the element of novelty in the Code as a whole would make it desirable to have first some experience of the working of the relevant provisions as recommendations. The Committee emphasises however the desirability of the situation being reviewed in the light of experience of the working of the provisions of the Code and stresses the need for trends or particular hazards revealed by the collection of more informative statistics to be taken into account; in the light of this experience the need for mandatory enforcement of certain provisions might better be judged. This review should be made after a trial period of about three years (see para. 34 below). Special considerations were adduced for making some exceptions to the general view expressed above.

13. The National Union of Seamen strongly urged that the serious nature of the accidents which occurred in some areas of the ship made it essential for the safety of the merchant seamen who might be involved that statutory regulations should be used to enforce the recommendations (1) relating to gangways and means of access (especially important for coasting vessels) in line with the relevant Docks Regulations, (2) to the provision and use of breathing apparatus for entry into closed spaces and (3) to the provision and use of protective wear including safety helmets and harness. In this they had the support of the Merchant Navy and Airline Officers' Association and to some extent the professional officers of the Board of Trade. The latter were of the opinion that regular inspection and proper maintenance of the equipment, particularly breathing apparatus, was crucial to the effective implementation of the relevant provisions and these objectives were best achieved by regulation. The British Shipping Federation Ltd and the Chamber of Shipping of the United Kingdom did not accept that regulations in any of these respects were necessary or would have in practice the results intended. They also considered that the use of regulations for isolated provisions of the Code would tend to weaken the force of the Code as a whole. The issues involved

*Code of safe working practices for the safety of merchant seamen. 1970. (HMSO).

in the three particular questions are discussed separately and more fully in the following sections.

IV. Access

Present position on gangways

14. The Steering Committee made a special study of the problem of safe access to and from the ship. The Docks Regulations 1934, made under the Factory and Workshop Act, 1901, do in fact require such access to be provided to specified standards for persons employed in the processes of loading and unloading a ship, and impose the duty of providing this access in the first place upon the master or owner of a ship. To a large extent in practice, though not necessarily so, seamen already benefit from this protection, and the recommended Code of Safety prepared by the Steering Committee contains important sections on the shipboard provision, erection and maintenance of gangways, accommodation ladders and other means of access which, when implemented, will serve to extend and reinforce the protection currently provided. But there are some problems which will not be solved in this way.

Unresolved difficulties in providing gangways

15. The essence of safe access is to have between a safe point on the ship and a safe point ashore a secure connection which may be traversed by all potential users without risk at all times. It is not sufficient that this connection should span the horizontal distance between ship and shore; it has also to bridge the vertical gap between the levels of the access points on the ship and ashore. The difference may be large and moreover, except in impounded docks, will vary continuously with fluctuations in the tide which again may be large. In such cases, the gap may be too great to be bridged by ordinary gangways or accommodation ladders, and builders' ladders are used to provide the necessary length. This problem is one of long standing and has been studied by gangway manufacturers. Nevertheless in view of the importance of the subject a small working party of members of the Steering Committee made a careful examination of the situation at typical mooring places where the problem existed in an attempt to arrive at some better alternative, for example an adjustable gangway (a design for which was prepared by the National Union of Seamen). The study showed that there was at present no practical design of gangway which was capable of meeting all the present variations in ship and quayside arrangements and in recognition of this—albeit with considerable reluctance—the Steering Committee has had to allow in the Code for the continued employment of the builders' ladder although it manifestly falls short of what is desirable as a means of access and may indeed be hazardous in certain conditions.

Recommendations for shore installations

16. In reaching this unpalatable decision, the Committee could not fail to be impressed with the inequity of requiring the master or shipowner to meet entirely the exigencies created by shore installations which are outside his control. It was noted that under the Docks Regulations the residual duty falls upon the employer of the labour concerned, but in the view of the Committee this does not go far enough towards dealing with the fundamental safety problem. Shipowners have accepted that they may reasonably be required to provide gangways and accommodation ladders of suitable construction but the Committee feels strongly that a proper concomitant to this would be the imposition upon the owner of a dock, staithe or wharf of a duty to provide

means at suitable levels for the easy utilisation of ships' gangways by all the vessels which might be expected to use the dock, staithe or wharf having regard to the normal conditions of tide or weather. It is accordingly recommended that consideration be given by the Board of Trade in consultation with other appropriate Government Departments to providing for this in fresh statutory regulations.

Lighting in docks

17. A second aspect of access about which the Committee was much concerned was the standard of lighting in docks. The present Docks Regulations require adequate lighting to be provided for those employed in the processes of loading and unloading but the seaman benefits less from this. The ship is the residence as well as the work place of the seaman, who in consequence has occasion to traverse the dock area at times when dockers are not working and some lights may have been extinguished. The representatives of the officers and of the men conducted independent surveys of ports and wharves in the UK. In most places, lighting was adequate though seldom very good. Individual cases of poor lighting were taken up with the Ministry of Transport and in respect of publicly owned docks remedial action was taken. In a few instances local representations by seafarers' representatives had the same effect. The Ministry of Transport however disclaims powers in the matter and in particular finds itself unable to take up deficiencies on privately owned wharves. The Committee regards this as unsatisfactory and recommends that steps be taken to impose a statutory requirement that lighting to a sufficient standard be provided in all areas of docks and wharves over which the seaman is required to pass on his way to and from his ship.

V. Safety Equipment and Clothing

18. The use of safety equipment or clothing is recommended in several provisions of the Code. The Steering Committee took the view that its prime responsibility was to determine where such protection would be likely to reduce the risk of injury to a man arising from the possible circumstances or nature of a particular operation, and that it was not germane to reaching a decision to consider the provenance of any equipment or clothing that might be involved. It is however implicit that the consequence of the recommendations should be that the specified equipment or clothing should be available when needed. In the view of the National Union of Seamen these provisions of the Code should be subject to regulation and the Merchant Navy and Airline Officers' Association were in sympathy with their views. It was pointed out that it was essential that breathing apparatus was maintained in good condition and the opinion was expressed that a regulatory system would facilitate this. The British Shipping Federation Ltd and the Chamber of Shipping of the United Kingdom stated that owners would supply equipment such as breathing apparatus, safety harness or life lines and goggles where recommended by the Code and might also provide protective wear for certain other operations. They saw however a number of difficulties in providing the more personal protective wear such as safety helmets and footwear. The Steering Committee concluded that the question of provenance was one for negotiation between the two sides of the industry and further discussion of the matter should be continued, as appropriate, in the National Maritime Board.

VI. Medical Aspects of Accident Prevention

General

19. In a lengthy paper submitted by the National Union of Seamen attention was drawn to the possible influence exerted upon the occurrence of accidents by the health, mental and physical, of the individual seaman which might be affected by his calling. Long-term health risks were specifically outside their terms of reference but the Steering Committee thought that the more immediate medical aspects warranted study and appointed an expert sub-committee (sub-committee B) to report upon these and related issues.

Factors concerned

20. A number of factors may influence the occurrence of an accident or the degree of its severity; they are chance, the accident proneness of the individual, risk acceptance, human factors, training, skill and experience and environment. Chance cannot be entirely eliminated though much can be done to reduce its incidence, for example by the constant exercise of foresight and by the consistent adoption of safe working practices. Accident proneness is commonly recognised in association with an obvious anxiety state but may derive from other temperamental or from physiological characteristics of the individual. Some measure of risk acceptance is inseparable from all human activity but the degree of it will vary according to circumstances and to the character of the individual and the motivations for it are diverse. The Steering Committee, while realising that these factors could hardly be predetermined and that consequently they could not be dealt with by definite recommendations, nevertheless draws attention to them as matters relevant to accident causation in which further studies may in the long term be rewarding.

Training

21. The relevance of general training and the related qualities of experience and skill to the safe conduct of work about the ship does not need comment but this aspect was largely outside the scope of the Steering Committee's work. Training in safety was specially considered and is referred to later. (See para. 31)

Heating and ventilation

22. The Code incorporates some specific references to the environmental factors of heat and humidity. These two are so closely integrated as to be inseparable in consideration. A combination of high temperature and high humidity can quickly have a severe effect on the physical condition of those subjected to it. Some thought was given to whether more exact guidance on the subject could be given in the Code, and the results of an investigation in the Royal Navy were examined. The conclusion was reached, however, that it would be impracticable to frame a table showing purported safe working periods in given conditions of heat and humidity because work loads could not be identified and the degree of an individual's tolerance and acclimatisation could have a marked influence. The Steering Committee therefore did not consider it could do more than provide guidance in the Code on general precautions to be taken when such conditions obtain and to stress the importance of ventilation. The Steering Committee recommends additionally that training curricula for officers' certificates should include some appropriate instruction in these aspects.

Noise

23. The general problem of noise was studied in 1963 by a committee under Sir Alan Wilson FRS* which came to the conclusion that it was reasonable to suppose that a high noise level might cause a higher rate of accident but said direct evidence was insufficient. The Committee did not feel that it could go much beyond this assessment of noise as an environmental factor in relation to accidents. It is clear that noise can be a danger in masking audible warning signals and intense noise may impair clarity of thought and judgment but the effects vary between individuals and although efforts have been made to determine levels on the International Standards Organisation scale of noise rating which would be appropriate maxima for these purposes, there are at present no generally accepted standards in the United Kingdom. A ship presents very particular problems in the number of sources of noise in the confined machinery spaces and in their varying intensities during operating conditions. A sound-reducing enclosure round the engine room controls provides a measure of relief but does not protect the man who is necessarily engaged in maintenance work on or close to operating machinery.

24. In examining this subject, the Committee felt that it could not ignore the considerable body of evidence that long exposure to excessive noise can lead to impairment of hearing in the long term, although this aspect was perhaps to be excluded on a strict interpretation of their remit. In this, as in the other respects, the difficulties of assessing effects has precluded any agreed standard of maximum safe levels but the Committee is concerned at the seriousness of the problem and, although it is realised that even the determination of an actual noise level is a complicated matter, the Committee has included in the Code a recommendation for the wearing of ear protectors in noisy conditions. Studies have been made of methods of reducing noise at the source and its transmission through the structure and these and other aspects are currently receiving attention in the shipping industry and elsewhere in the United Kingdom and internationally.

25. The Committee regards the provisions in the Code as but interim measures and considers that there is an urgent need to act on the results of such studies as they become capable of practical application in defining both the short term relationship of noise to accidents and the long term causation of deafness, along with the appraisal of appropriate methods of reducing noise which might be proposed.

Future research

26. Since the Steering Committee began its work the National Maritime Board has established an Accident Prevention Committee. In the view of the Steering Committee a continuing body of this kind can perform a very valuable function in keeping in touch with studies and developments having a bearing upon the environmental and other factors affecting accident rates and it is recommended that they be invited to accept these additional responsibilities.

Medical examinations and incidence of illness

27. In the absence of recognised criteria of personality which might be used to assess the suitability of the man's temperament to shipboard life, little can be done in respect of human factors affecting accidents other than by medically examining seamen before each engagement. The Committee agreed that the existing procedures were adequate for the immediate purposes of

*Committee on the problem of noise. Noise. Final Report. 1963. Cmnd. 2056 (HMSO)

screening men liable to cause an accident because of lack of physical fitness. It was noted that the paper referred to in paragraph 19 had demonstrated the lack of precise data available in the United Kingdom appropriate to the determination of long-term trends in health which would be relevant in this context. The Steering Committee understands that the British Shipping Federation Ltd are proposing to institute a system aimed at reporting illnesses in a standard form similar to that for accident reporting (see para 28 below). The Committee recognises that a collation of such data in itself and in conjunction with the accident reports could greatly facilitate research into many of the questions posed by the NUS paper or arising in respect of the environmental factors mentioned in the preceding paragraphs. Even the simple collection of statistics would contribute useful knowledge of the subject. It is recommended that the British Shipping Federation Ltd be asked to make available for study in the Accident Prevention Committee of the National Maritime Board collated data on the incidence of illness in the Mercantile Marine as soon as sufficient material is available and regularly thereafter.

VII. Accident Reporting

Present arrangements

28. The Pearson Court of Inquiry* had stressed the need for the collection of statistics of accidents on a uniform and comprehensive basis, and the matter was one which the Steering Committee was specially charged to examine. Section 240 of the Merchant Shipping Act, 1894, requires entries to be made in the official log book of all merchant ships (save certain exceptions) concerning any cases of injury to members of the crew and Section 425 of the same Act requires reports to be made to the Minister by the owners or masters of any ships involved in accidents causing loss of life or serious injury to any person, but it would be impracticable to compile useful statistics from these. The voluntary reporting system organised by the British Shipping Federation Ltd, although designed originally to enable prompt payments to be made of benefits under the Workmen's Compensation Acts now serves two purposes, firstly, to allow the settlement of any proper claim from the injured man and, secondly, to provide statistics the analysis of which would enable preventive measures to be taken against recurrence of accidents. The second objective was the main concern of the Committee and it was agreed that the BSF Form E.2. not only provides as much information as the Factories' Acts Form 43 but also sufficient data for a worthwhile collation of statistics for the purpose envisaged.

Advantages of voluntary system

29. In fact, it was noted that the BSF Form is rather more comprehensive than the Form 43 required by the Factories Acts and in some respects gives information which might not be so freely given in a statutory report. Because this latter information is essential to the BSF procedures for settling claims (and so indirectly to the benefit of seafarers generally) and speed of reporting is also important, it was apparent to the Steering Committee that the British Shipping Federation Ltd and owners would need to supplement any system of compulsory reporting by their own system. The reports made to the Federation cover all the ships owned by members and these amount to nine-tenths of the total British tonnage (the remainder being generally vessels of under 200 tons). This is comparable with the position in other industries

*Cmd. 3211 (HMSO)

in which reporting of accidents is statutorily required but where there is still a short-fall from 100% reporting. Admittedly, the voluntary system results in the reporting of very minor cases but it is considered that although this might present more work in collation it is better than the reporting only of major accidents since the degree of severity was often a matter of chance. The Federation is prepared to continue to make available to the seafarers' organisations through the Accident Prevention Committee of the National Maritime Board their half-yearly statistical analyses of accidents and their causes. The National Union of Seamen agrees that this goes a very long way towards meeting their desire for better information about accidents and in view of the difficulties which would be presented in implementing a system of compulsory reporting, concurs with other members of the Committee in accepting a voluntary system initially. The Committee did not see any advantage in publishing accident statistics outside the industry's representatives on the Accident Prevention Committee of the National Maritime Board, but agreed that the figures should be made available to the Board of Trade if required.

Scope of accident reports

30. The form of presentation of the statistics was also examined. The reporting procedures are intended to take account of every injury reported by a seafarer whether on or off duty, regardless of the severity of the injury or the period of incapacity of the man concerned, covering a 24-hour day seven days a week. In these respects the system differed from the statutory reports under the Factories Acts, which relate to accidents on duty which cause an absence of more than three days. The Committee recognised that the resulting higher figures shown might be taken in a crude comparison with shore industry to reflect upon the standards of safety in the shipping industry but considered that no attempt ought to be made to use discriminating criteria because of the probability of these being unevenly applied. Moreover a number of apparently minor injuries could develop more seriously. The Committee concluded, therefore, that it would be better not to interfere with the present system for the time being. Experience of using the statistics in the Accident Prevention Committee might suggest modification, but there is no doubt that discussion in that Committee would enable any required changes to be introduced to the satisfaction of those concerned.

VIII. Training in Safe Practices

Courses of instruction

31. The Committee was concerned to ensure that safe working practices should be taught in training schools and considers that the Code when published should be brought specially to the notice of training institutions as should any new lessons on preventive measures which may emerge. Training in safe practices can best be given as part of pre-sea training and must include some emphasis on off-duty periods bearing in mind that the ship is the residence as well as the work-place of crew members. All general instruction should be given with due regard to good and safe practice and it should be stressed to students that safe systems of work are being taught to them.

Role of shipboard accident prevention officers or committees

32. Since the Steering Committee was set up, the National Maritime Board has agreed that progressively from 1 January 1970 shipboard accident prevention officers be appointed or accident prevention committees be

constituted in implementation of the Pearson Committee's recommendations* to this effect. The Committee took the view that the accident prevention officer can be an effective means of instilling and maintaining safety-consciousness on board. He cannot be expected to act as an inspector and would need the support of heads of the other departments and of other members of the accident prevention committee familiar with the different departments, if such a committee were constituted; nevertheless he needs to be conversant with the whole Code and especially needs to be capable of putting across safety considerations to and inculcating safety-consciousness among other personnel on the ship. Special training to this end is therefore desirable for him. It was realised that this clearly was not possible of achievement for all accident prevention officers by 1 January 1970 and the training will have to be fitted into ordinary courses or in specialised courses as opportunity offers. Such training should also cover broadly his duties as accident prevention officer within the agreed terms of reference. These functions (or those of the accident prevention committee) should also include participation in the investigation of any accident occurring in order to establish the factual causes (but not to attribute personal blame).

Publicity

33. The Committee was of the opinion that the personal issue of a safety booklet covering the relevant sections of the Code could be most effective in promoting safety if its presentation were dramatic enough, and their recommendation on this is given in paragraph 11 above. Films can be effective in safety training generally but their cost tends to inhibit wide use being made of them and repetition tended to reduce the impact of the few that were available. In this connection the Committee noted with satisfaction the recent production of an accident prevention film by the British Shipping Federation Ltd. Posters which are issued quarterly by the BSF have a good impact but should be regularly changed. The Committee therefore recommends that the British Shipping Federation Ltd should be asked to maintain their regular issue of posters and that it should be one of the functions of the accident prevention officer or accident prevention committee to ensure a rotation of the posters on display.

IX. Future Measures

34. The Steering Committee was all too conscious of the fact that it was breaking new ground in the field of study which they were undertaking and that there was little to guide their judgment in what had been previously undertaken. It therefore considered ways and means whereby its work might from time to time be reviewed in the light of experience. The Code itself will doubtless need revision and amplification in detail as experience is gained from its operation and adjustments may have to be made to deal with hazards not foreseen arising from the introduction of new and unconventional types of vessel. It has been suggested in this Report that the National Maritime Board should keep in touch on a continuing basis with the studies being made in various places relevant to several issues raised on which the Steering Committee felt that, however desirable, it was not possible at the present time to make precise recommendations. In these respects, it is appreciated that both sides of industry and the Government will be carefully watching over the next two or three years the effect which the measures proposed may have upon the rate of accidents and will be anxious to implement any additional findings that come to hand. Nevertheless the

*Cmd. 3211 (HMSO)

Committee feels that there would be great merit in instituting at the end of about three years a review by a similar tripartite body which might look at the whole working of the Code as a system of voluntary control, examine the progress made in the several areas where further research is needed, take stock generally and make proposals for such further measures as the situation may indicate. It recommends accordingly.

X. Summary of Recommendations

35. 1. Owners and masters of all British ships should ensure that in all operations covered the appropriate safe methods are adopted as set out in the Code of Safe Working Practices which has been prepared (para. 11).
2. At least three complete copies of the Code should be carried on each ship, one each for the use of the master and the chief engineer and a third in a place accessible to any member of the ships complement who may wish to refer to it (para. 11).
3. The Code should be produced in separable sections which should be issued on a personal basis to all serving officers and ratings according to their rank and duties. A version of the sections for ratings should in due course be prepared in as attractive a manner as possible, with illustrations (paras. 11 and 33).
4. All new entrants to the industry should be provided with copies of the relevant sections on entry or during pre-sea training (para. 11).
5. The Code should be brought specially to the notice of training institutions who should pay regard to good and safe practice in all instruction given and emphasise to the students the safety aspects of systems of work being taught (para. 31).
6. The Chamber of Shipping of the United Kingdom should be invited to prepare and circulate to ratings on tankers a digest of safe practices particular to those vessels which are not included in the general Code (para. 6).
7. The Code should not in general be imposed by regulations at present because it is desirable to have first some experience of the working of the provisions on a voluntary basis and because many of the matters dealt with do not lend themselves to regulations (para. 12).
8. A duty should be imposed upon the owners of docks, wharves and staithes to provide means for the utilisation of normal gangways at levels suitable for all the vessels which might be expected to use the facilities (para. 16).
9. Similarly, a statutory requirement should be made for the provision of adequate lighting in all dock areas during reasonable hours for the benefit of the seaman on his way from and to his ship (para. 17).
10. Regulations should be made to ensure that specific warnings and instructions should be affixed to containers of paints which may present hazards in use by reason of the toxicity or high flammability of their solvent content or the toxicity or irritant nature of their ingredients (para. 9).
11. In view of the importance of the environmental factors of heat and ventilation and the difficulty of formulating very exact guidance on them, some instruction in these matters should be included in officers' training curricula (para. 22).

12. The National Maritime Board should be invited to accept a responsibility for keeping in touch with studies being undertaken nationally and internationally which have a bearing on environmental factors associated with accidents including noise (paras. 20, 25 and 26).
13. The British Shipping Federation Ltd should be asked to make available to the National Maritime Board on a continuing basis collated statistics on the incidence of illness in the Mercantile Marine (para. 27).
14. The system of accident reporting instituted by the British Shipping Federation Ltd should be continued on its present voluntary basis and the collated statistics should be made available to the seafarers representatives through the National Maritime Board and to the Board of Trade if required (para. 29).
15. Accident prevention officers now being appointed upon British ships by agreement within the industry should receive specific training including techniques of communication (para. 32).
16. In support of the issue of the Code (see (3) above) there should be continuous promotion of safety consciousness by means of posters and other suitable means and the British Shipping Federation Ltd should be asked to maintain their present efforts in this direction (para. 33).
17. A tripartite body should be brought together in about three years' time to review the working of the Code of Recommendations as a whole and the progress made in the various studies of relevant aspects (para. 34).

Appendix A

Steering Committee for the Safety of Merchant Seamen

Mr M J Service (<i>Chairman</i>)	Board of Trade
Mr D C Souter	British Shipping Federation Ltd and the Chamber of Shipping of the United Kingdom
Dr A L Hadley Mr D H Henderson Mr G McNee Mr J K Rice-Oxley Captain R S Richards Captain L Walker	British Shipping Federation Ltd
Mr A R Begg The late Mr D Carmichael Mr M R Rogers Mr D Seaman Mr G W Wilson	Merchant Navy and Airline Officers' Association, (representing also the Mercantile Marine Service Association and the Radio and Electronic Officers' Union)
Mr J Kinahan Mr F Nichol Mr J L Prescott Mr R L Spruhan	National Union of Seamen
Mr A D Sill	Department of Employment and Productivity
Mr B W Fowler (<i>Research Officer</i>)	
Mr C Bell Mr N Bell Captain R A Burrows Mr J W P Chidell Mr A J Hall Dr L M Kelly Captain E W Lewis Captain A C Manson Mr D R Murray Smith Mr C T Newton Captain H A Pond Mr G Thompson Mr G Victory Mr G Weir	Board of Trade
Mr C F Howard (<i>Secretary</i>)	Board of Trade

Members of Sub-Committee A on Accident Reporting and Training in Safety

Captain A C Manson (*Chairman*) Board of Trade

Mr D H Henderson*	}	British Shipping Federation Ltd
Mr A H Jenks†		
Captain R S Richards		
Mr J Weight†		

Mr A R Begg	}	Merchant Navy and Airline Officers' Association
Mr M R Rogers		

Mr R L Spruhan National Union of Seamen

Mr G S Lyndon Department of Employment and Productivity

Mr A J Hall†	}	Board of Trade
Mr C Uttley*		

Mr C F Howard (*Secretary*) Board of Trade

*Accident reporting only

†Training in safety only

Members of Sub-Committee B on the Medical Aspects of Accident Prevention

Mr A J Hall (*Chairman*) Board of Trade

Surgeon Rear-Admiral S Miles Medical Commission on Accident Prevention

Dr A L Hadley British Shipping Federation Ltd

Dr P S Edgecombe Merchant Navy and Airline Officers' Association

Mr J L Prescott National Union of Seamen

Mr A D Sill Department of Employment and Productivity

Dr L M Kelly Board of Trade

Mr C F Howard (*Secretary*) Board of Trade

